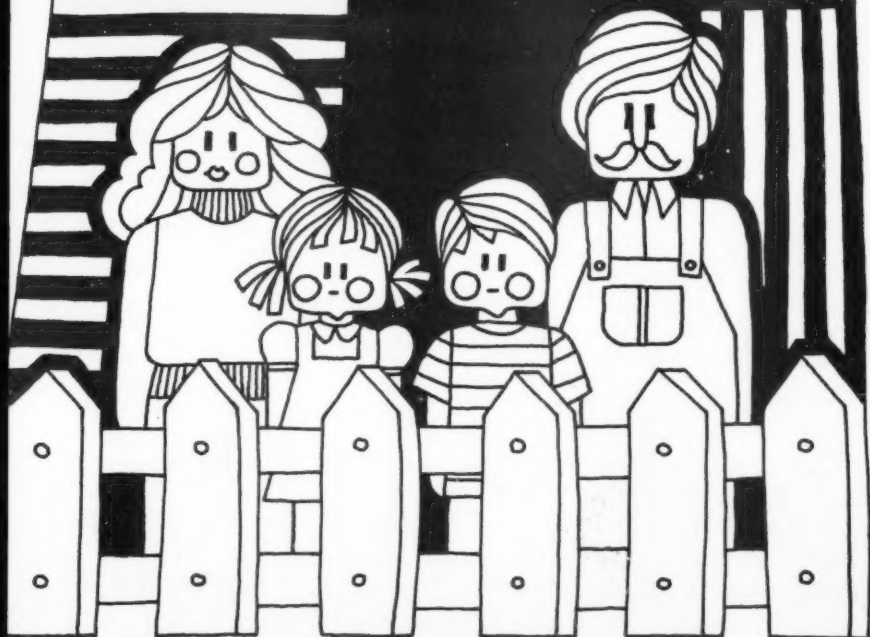


# agricultural situation

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ECONOMICS, STATISTICS, AND COOPERATIVES SERVICE  
U.S. DEPARTMENT OF AGRICULTURE



**THE FAMILY FARM:  
SIZING UP FOR SURVIVAL**



## THE FAMILY FARM: SIZING UP FOR SURVIVAL

Concern about the American family farm—and its future—is not new. The trend toward fewer and larger farms began in the mid-thirties and has continued, at a slower rate, throughout the seventies.

Since this magazine first reported on the implications of this trend 30 years ago, U.S. farm numbers have declined more than 50 percent and average farm size has nearly doubled.

Periodically, this has prompted some observers to predict the imminent demise of the U.S. family farm as a viable unit of production. According to the more pessimistic scenarios, large corporate or Government-run farming enterprises would have to assume the major responsibility for producing the Nation's food supply.

Obviously, such developments have not yet come to pass. In fact, viewing the progression toward fewer and larger farms as a serious threat to the family farm can obscure the fact that the trend is being set, for the most part, not by nonfarm corporations or wealthy outsiders buying into agriculture, but by family farmers themselves.

In recent years, about three-fifths of the farmland changing hands has been for the expansion of existing, predominately family farms. This suggests that, in one sense, the greatest threat to the family farm is from other family farms.

Of course, for anyone who left the farm 30 years ago, today's larger, more mechanized, and more productive unit may be a far cry from the typical family farm remembered.

But, by any other definition, it is still the family farm which makes up the vast majority of U.S. farms and accounts for the lion's share of U.S. agricultural production.

In 1974, when the last Census of Agriculture was taken, single-owner farms accounted for 90 percent of all U.S. farms with sales over \$2,500 and collected 67 percent of total U.S. agricultural receipts. Even among the large farms with annual sales of \$100,000 or more, well over half are operated by individuals or families.

Of the corporate farms, too, many

### U.S. FARMS FEWER AND LARGER

Year	Number	Average size
	- Thou. -	- Acres -
1950.....	5,648	213
1960.....	3,963	297
1970.....	2,949	374
1976.....	2,738	394
1977.....	2,706	397
1978.....	2,672	401

are held within the family and have been established for tax, inheritance, or other business reasons. Nine out of ten corporate farms reported 10 or fewer shareholders in 1974. In most of these cases, it's the family owner-operators who provide much of the labor, make the management decisions, assume the risk, and reap the gains or losses from their decisions.

However, all this does not mean that the growing concentration of agricultural production into fewer hands is without consequences. The effect is not only to restrict opportunities for new entrants but, sometimes, also to squeeze out capable farmers with limited capital.

While a number of actions have been taken at the Federal and local levels to assist limited-resource farmers and new entrants, the market selection process—sometimes aided by unforeseen side effects of Government tax and farm policies—has clearly succeeded in tipping the scales in favor of growth.

Over the years, steadily rising farm input costs have cut into producers' margins on each unit of production during periods of stable or lower farm prices. Farm operators have been faced with the need to boost production just to maintain their net incomes. This left them with two basic choices: increase their productivity or enlarge their farms.

Either way, the well-capitalized producers had a big advantage. They could buy or rent nearby farmland when it became available and were usually in a better position to adopt productivity-enhancing innovations involving mechanization and other technologies. With expansion, they may also have benefited from economies of scale in purchasing and using farm inputs and in marketing their products.

At the same time, the march of research and development was alter-

ing the input mix in their favor. High capacity four-wheel-drive tractors, center pivot irrigation systems, mechanical fruit and vegetable harvesters, and other new technologies were offering the productivity edge to those who could afford them and who had the productive capacity to use them.

The resulting heavy capital investment in the farm sector has been a major contributor to the success story of U.S. agriculture over the last few decades. In the same period (1950-78) that farm numbers decreased 50 percent, U.S. farm output expanded about 64 percent.

So the trend to fewer and larger farms may be seen as a sign of the U.S. family farm adapting, as in the past, to changing agricultural, economic, and technological realities. In that sense, agriculture has followed the same pattern as many other major U.S. industries.

But where has this left the small family farm that hasn't kept pace with growth in the farm sector? Although aggregate farm statistics mask a wide variety of situations, the overall picture is not encouraging.

Farms with annual sales of less than \$20,000 still make up the bulk of U.S. farms (about 70 percent in 1977), but they account for only a tenth of the value of all U.S. sales of agricultural products, down from nearly 50 percent in 1960.

Farms in the \$40,000 and over group have been increasing sharply even as total farm numbers decline, reflecting offsetting losses in the under \$20,000 sales group.

Similarly, cash receipts from farming are becoming increasingly concentrated on larger farms. In 1960, the 0.6 percent of all farms with sales over \$100,000 accounted for 17 percent of U.S. farm receipts. By 1977, 6 percent of all farms were in this group, and they accounted for 53 percent of farm receipts.

Of course, changes in prices

received by farmers—spurred by inflation—overstate the increase in size and concentration. For example, a farm grossing about \$50,000 in 1960 could have reached the \$100,000 sales class by 1977 even without any increase in the volume of marketings, because prices received doubled in that period. However, these effects are not nearly enough to account for the trends.

Net farm income figures also show the same unmistakable pattern of concentration. In fact, off-farm income has become increasingly critical to farms in the lower sales classes. Farm families in the \$10,000 to \$20,000 sales class earn, on the average, 65 percent of their total income off the farm, while those in the \$40,000 to \$100,000 sales class earn only about 25 percent of their income from off-farm sources.

For the larger farms, the source of off-farm income tends to be rent, dividends, and interest on investments, while, for the small farms, it is usually wages from non-farm jobs.

The incentives to expand continue today, with the combination of low

profit margins on each unit of production and significant economies of size.

In addition, the high capital requirements for getting started in farming mean that new entrants tend to be wealthier than average and start out with larger than average size operations. The traditional "farm ladder"—starting as a hired farmworker, then a tenant farmer, then a small owner-operator—is no longer a major route for new entrants.

What all this points to, of course, is that the long-term trend toward fewer and larger farms, though slowing, is not about to reverse. However, it should also suggest that this does not spell danger for the American family farm which, rather than resisting change, has been in its forefront.

Although growth has significantly altered the typical family farm and has meant some special difficulties for small, limited-resource farmers, there appears to be no question that the headline used in this magazine 30 years ago still applies: "Family Farm Can Compete."

#### PERCENT OF U.S. FARM NUMBERS AND FARM RECEIPTS BY SALES CLASSES

Farms with annual sales of:	1960	1970	1975	1976	1977
<b>Less than \$20,000</b>					
% of all U.S. farms .....	91	81	72	70	69
% of U.S. farm receipts .....	49	25	12	11	11
<b>\$20,000-\$39,999</b>					
% of all U.S. farms .....	6	11	12	12	12
% of U.S. farm receipts .....	18	20	12	11	11
<b>\$40,000-\$99,999</b>					
% of all U.S. farms .....	2	6	11	12	13
% of U.S. farm receipts .....	16	22	25	25	26
<b>\$100,000 and over</b>					
% of all U.S. farms .....	1	2	5	6	6
% of U.S. farm receipts .....	17	33	51	52	53

## PRODUCTIVITY: THE SKY'S THE LIMIT

U.S. farmers are not going to be fenced in when it comes to productivity. Although their best efforts may squeeze out only small productivity gains in the next two decades, by then some very promising new technologies should be entering the farmer's repertoire.

While the potential of these emerging technologies is difficult to assess, they may well shock agricultural productivity into a new growth spiral when they become commercially available for adoption. Researchers predict this could begin happening around the turn of the century.

One area—not at all new to agriculture—where advancing technology may have a major impact is in the development of new bioregulators to help producers control ripening and other characteristics of fruits and vegetables to facilitate harvesting. Bioregulators may also prolong the shelf life of some fruits and vegetables and reduce cooling costs.

Similarly, technology now in the works is expected to have a big role early in the 21st century in the field of photosynthesis enhancement—boosting the growth rates of crops by improving the natural process by which plants form carbohydrates and absorb nitrogen for protein synthesis.

The last of the three technologies considered by many to have the greatest commercial potential for the next several decades is in the area of livestock breeding. Known as cattle twinning, it would give producers the ability to stimulate multiple births in beef cattle by genetic selection, embryo transfer, and multiple ovulation through hormonal control.

Several other important technologies also loom on the horizon, including improved crop hybrids,

new pest control strategies, better fertilizer and water management systems, and the genetic development of plants which can thrive on salt water. However, researchers suggest that the commercial application of these technologies, in contrast with the three mentioned earlier, will do no more than make it possible to maintain the current rate of growth in U.S. agricultural productivity.

This rate began to slow in the sixties after two decades of accelerated growth. From 1940 to 1960, U.S. farm productivity—as measured by output per unit of all inputs—increased an average of 2 percent a year. However, since 1960, annual productivity gains have averaged only about 1½ percent.

Most of the emerging technologies listed are not expected to be in commercial use before the 1990's, so they are not likely to have any major impact on productivity in this century. Decades may pass from the commercial introduction of a new technology to its widespread adoption.

Typically, a new technology starts out slowly because it usually requires some investment and farmers are uncertain about its benefits. As the early adopters showcase its advantages, more and more farmers are attracted, and, consequently, productivity gains accelerate sharply. Finally, these gains taper off when most potential adopters are using the technology.

Of course, each time this occurs, it leaves the farmer more productive than before. Just 35 years ago, the average U.S. farmer produced food enough for 11 people; today he feeds 57—43 at home and 14 abroad. Although a number of factors contribute to productivity growth, over the long run the key ingredient is new technology.

In fact, U.S. agricultural history can be divided into four periods based on major sources of technological change: hand power, horse power, mechanical power, and science power.

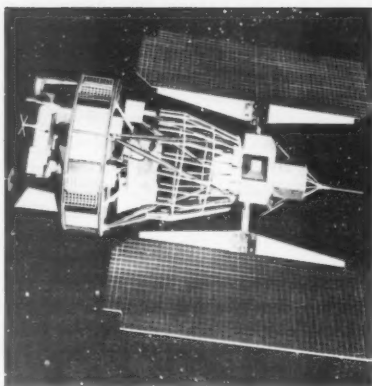
The current period of "science power" began during World War II and has featured an unprecedented flow of technological change in agriculture, some of it based on scientific refinements in chemical fertilizers, irrigation systems, insecticides, conservation practices, seed varieties, and livestock breeds.

Unlike natural resources, this science-based technology is a man-made resource which can be continuously renewed through research and development. Thus, concern that we are approaching a limit to growth in agricultural productivity is probably overly pessimistic.

To date, we have not even reached the limits to productivity growth from mechanization, improved plant varieties, agricultural chemicals, and other technological innovations of recent times. And before the potential of these known technologies is exhausted, scientists expect a new family of technologies, including the three already discussed, to emerge in the period between 1985 and 2000.

Looking even further ahead when these technologies reach their limits, controlled-environment agriculture—which would eliminate the effects of weather—could have a major impact, perhaps in a new epoch of technology based on "space power."

Whatever the future holds, there will almost certainly be periods of stress and stagnation in productivity—but there will also be times of unprecedented growth. The longer range prospect is for moderate growth as society allocates limited public funds to agricultural research and education to keep the supply of food reasonably in balance with domestic and world demand.



## NEW FOCUS ON PICTURES FROM SPACE

After 6 years in the experimental stages, crop forecasting by satellite recently took a giant step. Information collected by a satellite was matched against ground-gathered data to improve the USDA yearend estimates of Iowa's planted corn and soybean acreages.

This was the first time researchers of the Department's Economics, Statistics, and Cooperatives Service (ESCS) analyzed satellite data for an entire State for use in a regularly scheduled report of crop acreages.

All USDA satellite research is carried out with the cooperation of the National Aeronautics and Space Administration (NASA) and is based on data relayed from Landsat satellites that orbit the earth about 600 miles away.

The Iowa satellite information reduced sampling errors and demonstrated that Landsats, when assisted by ground-gathered data, can be used to identify crops and indicate planted acreage.

The satellites do not take a "picture" of the crop or land as we know it, but instead measure the solar energy reflected from individual



crops. The resulting spectral measurements are transmitted to ground stations as digital information which is converted to a rough reflection of what the satellite observes.

The measurements, which are different for each crop, are known as a crop's "signature." Once the signature of a given crop is discovered, technicians can then identify other areas where the same crop is planted.

Satellites were used to estimate crop conditions and acreages in the recently completed Large Area Crop Inventory Experiment (LACIE), involving USDA, NASA, and the National Oceanic and Atmospheric Administration.

This experiment focused on using satellite data to forecast production of a single crop—wheat—during crop years 1974/75 to 1976/77 in several test areas. At first it looked at production in the U.S. Great Plains. Later, the research was expanded to the USSR, China, Argentina, Brazil, and India.

This project demonstrated some potential for crop reports using earth-orbiting satellites. However, many technical problems remain to be resolved. For example, with current remote sensing technology, the costs of collecting and interpreting detailed acreage and production data nationwide for continuous reports could be astronomical.

In addition, the time it now takes to obtain and process data from the satellite—anywhere from 29 to 60 days—remains a serious obstacle to adopting it for USDA's crop reporting system. Landsats also have shown little potential in determining crop yields.

So, although crop forecasting by satellite has come a long way in recent years, the best source by far is still the farmer himself. In fact, satellites aren't even in the running when it comes to reporting livestock production, future cropping and

marketing plans, production expenses, and so on.

However, few countries have a crop reporting system that can match the accuracy and timeliness of ours, which depends on the cooperation of thousands of U.S. farmers who submit production and other information to USDA's Crop Reporting Board.

And because what happens in many of these countries affects markets for U.S. farm products, this suggests a potentially important role satellites can play now—as an early warning system of world crop shortages and surpluses.

The different requirements for this role, compared with meticulously detailed crop inventory counts, will apparently minimize the limitations of current remote sensing technology.

As a result, USDA is moving into a new phase of crop surveillance via satellite—Crop Condition Assessment (CCA). Under this project, the Department's Foreign Agricultural Service plans to use remote sensing to detect world crop developments and conditions such as frosts in Brazil, floods in India, drought in China, or abundances of crops in major producing countries.

The idea is that timely information on possible trouble spots in world crop production would give producers and policymakers greater flexibility in planning ahead. If successful, this would permit swift action to lessen marketing and distribution problems—and price fluctuations—that often arise because of lack of early information on foreign crops.

Even though this early-warning system focus may be in the spotlight, ESCS will continue working to refine the use of satellite data in estimating U.S. crop inventories. Already, there are tentative plans which call for satellite data to be used in estimating crop acreages in two States sometime next year.

# A BLOOMING BUSINESS

Business is still blooming in ornamentals, according to the latest figures released by USDA's Crop Reporting Board.

Sales of the 17 floricultural crops surveyed climbed to \$831 million in equivalent wholesale value in 1978. This is more than \$71 million, or 9 percent, higher than the value of sales a year earlier.

Although the number of producers, and output, declined for many of the crops since 1977, value of sales was up in nearly every case—primarily because of higher average prices.

Foliage plants registered the largest dollar gain, up almost \$24 million from 1977. Foliage and bedding plants together accounted for 52 percent of the total value of

ornamentals in 1978.

Cut flower sales, valued at \$231 million in 1978, were 8 percent higher than in 1977. Declines in the values of gladioli and snapdragons were more than offset by increases for all other cut flower crops.

During 1979, producers plan to expand the production area of anthuriums by 13 percent and miniature carnations by 6 percent. Smaller gains are expected for foliage, vegetable bedding, and flowering bedding plants and for potted poinsettias. Five crops show declines in producers' intentions.

Data for the table below were obtained from commercial growers in the major producing States for each crop. For survey purposes, commercial growers are those who had \$10,000 or more in gross sales of cut flowers, flowering and foliage plants, bedding plants, or cultivated florist greens.

## FLORICULTURE BUSINESS STILL BLOOMING

Crop	Producers		Value of sales <sup>1</sup>		Production area	
	1977	1978	1977	1978	1978	1979 intended
	-- Number --		-- Mil. dollars --		-- Mil. sq. feet --	
Carnations, standard . . . . .	503	461	42.3	42.6	25.3	24.8
Carnations, miniature . . . . .	217	208	6.0	6.7	3.1	3.3
Chrysanthemums, standard . . . . .	990	962	28.6	31.9	23.4	22.6
Chrysanthemums, pompon . . . . .	1,154	1,122	35.5	38.9	40.0	38.7
Chrysanthemums, potted . . . . .	1,381	1,380	55.3	59.6	17.8	17.7
Gladioli . . . . .	82	80	16.5	16.2	<sup>2</sup> 7.4	<sup>2</sup> 7.0
Roses, hybrid tea . . . . .	237	221	62.2	69.1	22.3	22.6
Roses, sweetheart . . . . .	198	180	16.6	18.0	5.2	5.3
Foliage plants . . . . .	1,879	1,979	275.3	299.0	119.7	122.5
Snapdragons . . . . .	619	601	2.7	2.6	2.1	2.1
Poinsettias, potted . . . . .	1,980	1,997	47.1	54.8	29.6	30.4
Geraniums, potted . . . . .	2,525	2,524	30.5	33.8	17.1	17.4
Lilies, potted . . . . .	1,351	1,302	17.3	17.1	7.1	7.1
Hydrangeas, potted . . . . .	493	476	6.2	7.0	3.2	3.3
Anthuriums . . . . .	48	56	3.1	4.5	10.7	12.2
Bedding plants, flowering . . . . .	2,717	2,676	84.5	96.8	41.3	42.6
Bedding plants, vegetable . . . . .	2,433	2,363	30.5	32.4	14.2	14.8

<sup>1</sup>Equivalent gross wholesale value of all crops except foliage. Foliage data based on net value of sales.

<sup>2</sup>Thousand acres.



## BANNER YEAR FOR EXPORTS

Though it's still early, USDA forecasters figure it's a pretty sure thing that the value of our farm export sales will break all previous records by September 30, the end of the current fiscal year.

Based on prospective U.S. supplies and agricultural conditions around the world, our farmers can expect to ship over \$30 billion worth of goods in fiscal 1979. Values will be up sharply for oilseeds and animal products.

Total volume of shipments will probably stay fairly near last year's 122 million metric tons. Volume increases are expected for many important export products—including soybeans, feed grains, rice, protein meal, and tobacco. However, a 2-million-ton decline in wheat exports is likely.

The current forecast is underpinned by the rapid pace of sales in October-December—the first 3 months of the fiscal year. These were up more than a third over the year-earlier period.

Before outlining the export forecasts for specific farm commodities, here's a quick rundown of world economic conditions which help explain the expected ups and downs in our farm shipments this year.

One of the key developments this year is the steep rise in oil prices. Oil producing countries have raised their posted prices beyond levels set by the Organization of Petroleum Exporting Countries (OPEC) last December. At that time, OPEC members agreed to price increases amounting to 14.5 percent by October 1979, starting with a 5-percent increase on January 1.

However, they have already begun charging the full 14.5-percent increase, and some OPEC nations have also announced their intentions to add surcharges.

While the OPEC oil price increase will curtail the buying power of some nonmember countries, the overall effect on U.S. agricultural exports is expected to be slight.

Economic growth in our two largest markets—the European Community (EC) and Japan—is expected to exceed the 2 percent forecast for the U.S. in 1979. This, coupled with the depreciation of our dollar, is spurring our exports.

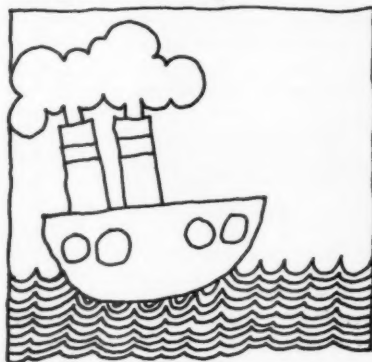
Larger sales are also expected to the OPEC countries, whose capacity to import is increasing sharply as a result of the oil price hike.

Economic growth for the developing countries as a group is projected at an annual rate of over 5 percent in 1979. Only a few, like Zambia, will face major financing constraints.

Major U.S. markets among the developing nations—especially Korea, Taiwan, and Mexico—have favorable growth and payments prospects.

The outlook for U.S. exports shares the same generally optimistic tone, although, as usual, it varies depending on the commodity. Exports are expected to swell for most commodity groups, with oilseeds a particularly big gainer.

Following a 30-percent volume gain in fiscal 1978, soybean exports are expected to increase another tenth this year to a record of over 21 million tons. Sales value will also rise to an all-time high.



The surge in our sales is the result of strong global demand plus some tightening in world supplies as poor weather has lowered prospects for Brazil's soybean crop.

One of the key elements in the forecast of U.S. soybean shipments is a projected 5-percent increase in prospective exports to the EC reflecting their continued push to expand livestock output.

In addition, the Soviet Union again had a below-average sunflowerseed crop last year and is expected to turn to the U.S. for over 1 million tons of soybeans to fill the gap.

Another big boost for U.S. exports will come from feed grains. U.S. feed grain exports are now expected to top last year's record, despite the sharp increase in world production and a buildup in world stocks.

Exports during October-January

were about 1 million tons above those of a year earlier. Key factors in the market this year are: the opening of the Chinese market for 3½ million tons of U.S. corn; larger than anticipated exports to the EC as a result of their buildup in hogs and poultry; and exports to the USSR well above the minimum 3 million tons set in the grain agreement.

Soviet purchase prospects reflect continued expansion in the USSR's livestock and poultry industries and a decline in their 1978 corn crop.

In contrast to soybeans and feed grains, U.S. wheat exports in fiscal 1979 will be down about 6 percent because last year's record world output of 436 million tons has reduced demand and increased competition in major markets.

Major factors in the wheat export market include a likely cut of 10 to 15 percent in our sales to the EC

## U.S. AGRICULTURAL EXPORTS<sup>1</sup>

Commodity	Volume		Value	
	1978	1979 <sup>2</sup>	1978	1979 <sup>2</sup>
- - 1,000 metric tons - -      - - Mil. dollars - -				
Grains and preparations ....			10,866	11,600
Wheat and products.....	33,197	31,000	4,139	4,500
Rice (milled) .....	2,108	2,200	833	640
Feed grains.....	55,545	55,900	5,695	6,100
Oilseeds and products.....			7,451	8,700
Oilcake and meal .....	5,840	5,900	1,176	1,400
Soybeans.....	19,686	21,400	4,749	5,800
Vegetable oils and waxes..	1,545	1,375	966	880
Cotton .....	1,317	1,300	1,694	1,800
Tobacco .....	272	280	1,132	1,300
Fruits, vegetables, and nuts <sup>3</sup>	- - -	- - -	1,922	2,100
Animals and products .....	- - -	- - -	2,810	3,300
Other .....	- - -	- - -	1,423	1,500
Total .....	- - -	- - -	27,298	30,300

<sup>1</sup>October-September years. <sup>2</sup>Forecast. <sup>3</sup>Includes pulses.

## U.S. AGRICULTURAL TRADE BALANCE

Fiscal years ending Sept. 30	Exports	Imports	Trade balance
----- Bil. dollars -----			
1972.....	8.24	5.94	2.30
1973.....	14.98	7.74	7.24
1974.....	21.61	10.06	11.55
1975.....	21.85	9.47	12.38
1976.....	22.76	10.51	12.25
1977.....	24.00	13.38	10.62
1978.....	27.30	13.89	13.42
1979 forecast ...	30.3	14.8	15.5

because of that area's record 1978 crop and some slippage in sales to the USSR in light of that country's record wheat harvest. U.S. wheat sales to the USSR this year are likely to total little more than the minimum 3 million tons required by the U.S.-USSR grain agreement.

However, a new market for wheat in China will help offset some of the smaller sales elsewhere. The Chinese are in the world market for about 9 million metric tons of wheat to use for upgrading diets and stockpiling. The U.S. will probably supply about 3 million tons of that total.

Exports of most other commodities are expected to gain significantly in fiscal 1979.

U.S. cotton exports should remain very large. Despite a smaller crop last year, our export supplies are adequate and U.S. prices are competitive on the world market. World import demand is expected to remain strong, and production in several other countries has been disrupted by bad weather.

For animal products, higher prices are expected to push export values to a record \$3.3 billion.

Beef and slaughter cattle exports to Canada are expected to increase because of reduced Canadian

production and the easing of restrictions on chemical residues. Also, we should sell more beef to Japan, where demand for meat continues to outstrip domestic production.

Poultry and egg shipments are expected to continue to expand, with sales increasing to the Caribbean, Japan, Hong Kong, Singapore, and the EC. However, the value of our dairy sales will continue its downward trend because of low prices on the world market for nonfat dry milk.

For tobacco, a 6-percent volume increase is in prospect. Stocks of U.S. leaf are small in many countries, and the depreciation of the U.S. dollar has restrained price increases to importers. Larger sales are forecast to Japan, EC, Thailand, and South Korea.

Fruits and vegetables should score some gain in export value, although volume could slip for several items. U.S. exports of citrus and dried fruits are likely to fall because of reduced U.S. production and increased competition in the EC from Mediterranean producers.

Our sales total for sugar and tropical products is expected to climb about 7 percent. Exports of sugar and flavoring sirups and extracts are up. Also, the normalization of relations with China will likely increase trade in ginseng as well as flavoring sirups and extracts.

The record apparently in store for U.S. exports is not likely to be the only U.S. trade record set this year for farm products. Agricultural imports by the U.S. in fiscal 1979 are expected to mount approximately 6 percent to nearly \$15 billion, mainly due to price hikes for meat products.

If the current forecast of U.S. exports and imports is near the mark, our agricultural trade surplus (exports minus imports) will increase again this year, perhaps reaching \$15 billion, compared with \$13.4 billion in fiscal 1978.



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# Briefings

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RECENT REPORTS BY USDA OF ECONOMIC, MARKETING, AND RESEARCH DEVELOPMENTS AFFECTING FARMERS.

**FARM INCOME FORECAST RAISED.** . . USDA's forecast has headed up sharply since an earlier reported range of \$23 to \$29 billion for 1979 net farm income. Net income is now expected to exceed the revised—but not yet final—1978 figure of \$28.8 billion. By late March, the projected 1979 range was \$28 to \$33 billion, compared with \$20.6 billion in 1977 and \$18.8 billion in 1976. Revisions in forecasts of livestock prices were largely responsible for the higher farm income forecast. Although these projected gains, if realized, will be good news for many, they're not likely to be evenly distributed throughout the farm sector.

**UPDATE ON THE HOG STORY.** . . The 14-State inventory of hogs and pigs on March 1, 1979, was estimated at 50.5 million head, up 13 percent from a year earlier and the largest March 1 inventory since 1971. The December-February pig crop totaled 18.3 million, up 17 percent, and litter size averaged 6.87 pigs, compared with 6.84 a year earlier. However, the Crop Reporting Board's survey results indicated that death losses due to disease and the severe winter were about 25 percent greater than last year for the December-February quarter. Looking ahead, prospects are for more porkers. For the March-May period, producers reported intentions to have 3.55 million sows farrow, 24 percent more than last year, and for June-August, 3.16 million sows, up 19 percent.

**KEEPING TABS ON FOREIGN-OWNED FARMLAND.** . . Aliens who own or have a financial interest in more than 1 acre of U.S. farmland—or who gross more than \$1,000 from any plot of U.S. land—must now report their holdings to the Federal Government. Under regulations issued in early February by USDA, foreign interests who owned farmland before February 6, 1979, must report by August 6. Those acquiring land after February 6 must report within 90 days of the transfer. Failure to report ownership could result in a fine of up to 25 percent of the property's assessed value. In general, small plots, such as household gardens, are excluded. Reporting forms are available in all of the approximately 2,700 ASCS county offices in the 50 States and Puerto Rico.

**LACTOBACILLI ENLISTED IN FIGHT AGAINST NITRITES.** . .Federal meat inspection regulations were amended on February 13 to permit the use of lactobacilli in bacon curing. Lactobacilli are microorganisms that generate small amounts of lactic acid, which reduce the level of nitrite in bacon. Nitrites lead to the development of nitrosamines when bacon is cooked, and nitrosamines have caused cancer in laboratory animals. Lactobacilli have proven to be safe. They are naturally present on the surface of meats and are added to such foods as cheese, yogurt, and Lebanon bologna.

**LESS BEEF, MORE PORK LAST YEAR.** . .The Crop Reporting Board announced that total U.S. red meat production in 1978 weighed in at 38.6 billion pounds, down 3 percent from the 39.7 billion pounds produced in 1977. Beef output totaled 24.2 billion pounds, down 4 percent from 1977, while pork production increased 1 percent to 13.4 billion pounds. Commercial cattle slaughter dropped 6 percent to 39.6 million head, but average live weight at slaughter was up 12 pounds to 1,036 pounds. The hog kill was about the same as in 1977 at 77.3 million head. Average live weight was 240 pounds, up 3 pounds.

**BIG BOOST FOR FARMLAND.** . .Last year's sharply higher farm prices and the big gain in net farm income provided a shot in the arm to farmland buyer and seller expectations. For the year ending on February 1, 1979, farm real estate values climbed an average of 14 percent, compared with 9 percent the previous year. The five States showing value increases of 20 percent or more were California, Nebraska, Arkansas, Colorado, and Ohio.

**FIRST CLASS ACCOMMODATIONS.** . .Texas will test a new self-contained cattle car that could cut cattle losses in shipping by rail. The car, designed to transport cattle long distances, will provide feed, water, and resting room for cattle. It should increase the cattle's resistance to shipping fever, or bovine respiratory disease, a major cause of cattle deaths in the U.S. Matching funds for the project are being provided by Texas and USDA's Agricultural Marketing Service.

**GRANTS AWARDED.** . .Indiana and New Mexico will each receive matching USDA grants to improve marketing of agricultural products. Indiana will help farmers and marketing firms expand export markets for farm products by developing contacts with foreign buyers. The project will also help with transportation and credit arrangements. The New Mexico Department of Agriculture will use its grant to finance a toll-free telephone line that hay buyers can call to learn who has hay for sale. This should improve marketing efficiency and encourage direct sales from producers to buyers.



# Statistical Barometer

Item	1977	1978	1979—latest available data
<b>Consumer price index</b>			
All items (1967=100)	181.5	195.4	207.1 February
Food (1967=100)	192.2	211.4	228.2 February
<b>Farm food market basket:<sup>1</sup></b>			
Retail cost (1967=100)	179.2	199.4	218.5 February
Farm value (1967=100)	178.1	207.4	239.5 February
Farmer's share of retail cost (percent)	38	39	41 February
<b>Hogs and pigs, 10 States:<sup>2</sup></b>			
Hogs and pigs on farms, March 1 (mil.)	38.8	39.3	44.5
Kept for breeding (mil.)	6.2	6.1	7.3
Market (mil.)	32.6	33.2	37.2
Sows farrowing, Dec.-Feb. (mil.)	2.0	2.0	2.3
Pig crop, Dec.-Feb. (mil.)	13.6	13.6	15.9
Pigs per litter, Dec.-Feb. (mil.)	6.8	6.9	6.9
<b>Agricultural prices:</b>			
Prices received by farmers for all products (1967=100)	183	210	246 March
Prices paid by farmers for commodities and services, interest, taxes, and wages (1967=100)	202	219	243 March
<b>Farm employment and wage rates:<sup>3</sup></b>			
Total employment (1967=100)	85	80	76
Family labor (1967=100)	78	73	72
Hired labor (1967=100)	103	100	92
Wage rates (1967=100)	225	240	257

<sup>1</sup> Average annual quantities per household bought by all urban consumers, based on Bureau of Labor Statistics figures.

<sup>2</sup> Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin.

<sup>3</sup> Annual averages for 1977 and 1978; data for 1979 obtained during survey week of January 7-13.



## AGRICULTURAL SITUATION

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